

## **REMARKS**

### **Status of Claims**

Claims 1, 3, 5-10, 12-14, 16-21 and 23-26 are pending, of which claims 1, 9 and 23 are independent.

Claims 1, 9 and 23 have been amended to correct informalities in the claim language and to more clearly define the present subject matter. Claims 4, 11 and 15 have been cancelled without prejudice. Care has been taken to avoid introducing new matter.

### **Rejection - 35 U.S.C. § 112**

Claim 9 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully submit that the amendment made to claim 9 overcomes the rejection.

### **Rejection under 35 U.S.C. §§ 102/103**

Claims 1, 3-14, 16-17 and 24-25 were rejected under 35 U.S.C. § 102(b) as being anticipated by Bertram et al. (US 2003/0042850). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bertram et al. (US 2003/0042850). Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bertram et al., and in view of Watanabe et al. Claims 19-21, 23 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bertram et al. in view of Koyama (US 2004/0207578). These rejections are traversed for at least the following reasons.

Applicants respectfully submit that, at a minimum, none of the cited references discloses or suggests that *“the semiconductor host crystal includes an oxide or a composite oxide including at least one kind of element selected from a group of Zn, Ga, In, Sn and Ti,”* as recited

by amended claims 1, 9 and 23, which was originally recited by claim 15. In rejecting original claim 15, the Examiner asserts that Bertram discloses, at paragraph [0021], semiconductor host crystal including at least one kind of element selected from a group of Zn, Ga, In, Sn, and Ti. Further, the Examiner asserts that oxide compounds of Zn or Ti are also included as semiconductor nanometer crystals.

However, paragraph [0021] of Bertram discloses “semiconductor crystals,” and fails to disclose that the semiconductor crystals **includes an oxide or a composite oxide** including at least one kind of element selected from a group of Zn, Ga, In, Sn and Ti. Paragraph [0021] of Bertram does not disclose any oxide of Zn, Ga, In, Sn or Ti included in the semiconductor nanometer crystals. Further, no other portion of Bertram discloses that the semiconductor nanometer crystals further include an oxide of Zn, Ga, In, Sn or Ti. Thus, the Examiner’s assertion that “oxide compound of Zn or Ti are also included as semiconductor nanometer crystals” has no factual basis.

Applicants further submit that an oxide or a composite oxide of Zn, Ga, In, Sn or Ti is not replaceable with the semiconductor materials of Zn, Ga, In, Sn or Ti (e.g., ZnS). First, if the semiconductor materials of Zn, Ga, In, Sn or Ti were replaced with an oxide of Zn, Ga, In, Sn or Ti, the crystal would not be a semiconductor any more. Second, Applicants note that the Examiner erroneously applies *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). In *Sinclair & Carroll Co.*, it is stated that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination. In the instant case, however, oxide of Zn, Ga, In, Sn or Ti is not suitable for semiconductor nanometer crystals since oxides of Zn, Ga, In, Sn or Ti are not semiconductors. The oxides of Zn, Ga, In, Sn or Ti clearly have different properties from the semiconductor materials of Zn, Ga,

In, Sn or Ti. As such, it is clear that, at a minimum, Bertram fails to disclose the above identified feature of claims 1, 9 and 23.

It is also clear that none of the remaining cited references cures the deficiency of Bertram, and it would not have been obvious to add this feature to any combination of the cited references.

Furthermore, Applicants note that the filing date of Koyama is December 10, 2003, while the present application claims foreign priority of JP 2003-190446 and JP 2003- 190449 filed July 2, 2003. Applicants are submitting the certified English translations of the Japanese Patent Application JP 2003-190446 and JP 2003- 190449 herewith for Examiner's review to perfect the claim to priority back to July 2, 2003. In view of that priority date, Koyama is not an appropriate prior reference under 35 U.S.C. § 103(a).

Based on the foregoing, Applicants respectfully submit that claims 1, 9 and 23 and all claims dependent thereon are patentable over the cited references. Thus, Applicants respectfully request that the Examiner withdraw the rejection of claims 1, 3-14, 16-17 and 24-25 were rejected under 35 U.S.C. §§ 102/103.

### CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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